

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

**DYNAENERGETICS EUROPE GMBH and
DYNAENERGETICS US, INC.,**

Plaintiffs,

v.

**GR ENERGY SERVICES OPERATING GP
LLC; GR ENERGY SERVICES
MANAGEMENT, LP; and GR ENERGY
SERVICES, LLC,**

Defendants.

Civil Action No. 6:21-cv-00085-ADA

GR ENERGY'S OPENING CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

GR Energy Services Operating GP LLC; GR Energy Services Management, LP; and GR Energy Services, LLC (collectively, “GR Energy”) respectfully file this opening claim construction brief and request the Court to adopt the proposed constructions provided below.

II. TECHNICAL BACKGROUND

U.S. Patent No. 10,844,697 (the “’697 patent”) relates to technology in the field of perforation gun systems used in the oil and natural gas industries. An oil well is a bore that is drilled into the earth’s surface and designed to extract hydrocarbons from the underground formations to the surface for commercial use. Once a well bore is drilled to the desired location the well is cased. Casing requires placing sections of hollow steel pipe into the well bore and securing those sections of pipe with concrete to permanently set the casing in place.

With the casing in place, a crew can place perforation guns down the well to stimulate oil production. In simple terms, perforation guns include a string of shaped charges that, when detonated, fire a series powerful targeted explosions that puncture holes through the steel casing and cement, and create perforation channels in the rock formation. Hydrocarbons can then flow from the formation, through the perforation channels, into the well bore, and ultimately to the surface.

The ’697 patent claims a particular “assembly for establishing an electrical connection in a tool string,” such as such as perforating gun systems. ’697 patent at 11:18–20. Claim 1 is directed to a perforating gun carrier with a detonator, shaped charge, and a tandem seal adapter. The tandem seal adapter features a bore extending through its length and a pressure bulkhead sealingly received in that bore. The pressure bulkhead, in turn, contains a pin connector assembly with ends extending beyond the bulkhead. The claimed electrical connection assembly relays an

electrical signal through the bulkhead while providing a seal between the detonator and the environment.

III. LEGAL STANDARDS

The Court is familiar with the law of claim construction. GR Energy will provide relevant legal authority for particular legal principles where appropriate.

IV. DISPUTED CLAIM TERMS

A. “first end” / “second end”

GR Energy’s Proposed Construction	Dyna’s Proposed Construction
“first furthest part, point, or edge lengthwise” / “second furthest part, point, or edge lengthwise”	Plain and ordinary meaning

Claim 1 of the ’697 patent requires a tandem seal adapter and a pressure bulkhead within a perforation tool string. The claim further requires that each of these physical components have a “first end” and a “second end.” Both the intrinsic and extrinsic evidence make clear that the term “end” refers to the furthest part, point, or edge of each of these components when viewed lengthwise within the perforation tool string.

Rather than provide a competing proposed construction that adds clarity to this disputed term, Dyna’s proposed “plain and ordinary meaning” construction does nothing other than create ambiguity. In the absence of this construction, however, the terms lose their meaning, as it becomes unclear where one end of a component begins and the other end ends. But the very essence of the Dyna’s purported invention is the configuration of and spatial relationship amongst the tool string components. Accordingly, GR Energy requests that the Court adopt its proposed construction for this disputed term and provide a clear definition of the metes and bounds of the claim.

1. Intrinsic Evidence

The intrinsic evidence demonstrates the term “end” refers to the furthest part, point, or edge of a particular component when viewed lengthwise. Within claim 1, two physical components are required to have a “first end” and a “second end”: the tandem seal adapter and the pressure bulkhead. The tandem seal adapter is described as having a first and second end with a bore that extends entirely through the tandem seal adapter from the first end to the second end. ’697 patent 11:21–23. Figure 25 represents the tandem seal adapter. While figure 25 does not expressly label the first or second end of the tandem seal adapter, the image below shows in red where the required bore begins (first end) and ends (second end). The first and second ends of the tandem seal adapter are identified with blue lines.

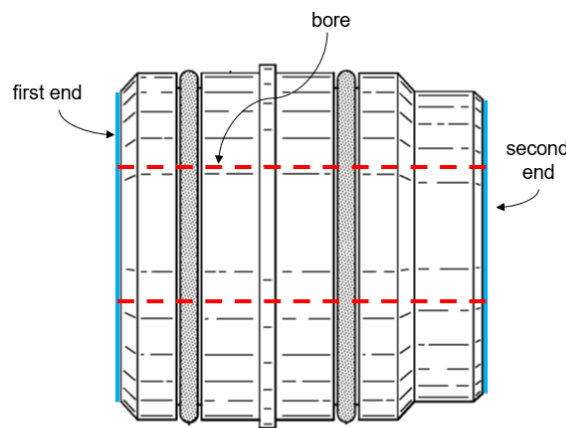


FIG. 25

Dyna may argue that the first end and second end of the tandem seal adapter do not refer to the outermost edges of the component but instead refer to the first and second “side” or “half” of the tandem seal adapter. And perhaps Dyna will argue the midline of each component demarks the first and second end. This argument misses the mark. The intrinsic record shows that the patentee knows full well how to use the words “side” and “half” to describe the invention where appropriate. *See Acumed v. Stryker Corp.*, 483 F.3d 800, 807 (Fed. Cir. 2007).

For example, figure 15 of the '697 patent depicts a component referred to as the “top connector.” Importantly, the patentee explains that the top connector has a “top half” (15A) and a “bottom half” (15B). '697 patent at Fig. 15, 8:47–49 (“A plurality of securing mechanisms may be provided to couple the top half to the bottom half”). The same is true for the patentee’s careful use of the word “side” in direct contrast to “end.” For example, figure 12 “is a side view of the half-portion of a top connector,” whereas figure 16 “is a front end view” of the top connector. *Id.* 4:16–17, 24–25. Importantly, figure 12 depicts the entire *side* of the top connector and figure 16 depicts that same component looking directly at outermost edge, i.e., the end.

Claim 1 also requires “a pressure bulkhead having an outer surface, a first end and a second end.” *Id.* at 11:30–31. The “outer surface of the pressure bulkhead is sealingly received in the bore of the tandem seal adapter.” *Id.* at 11:31–32. Importantly, a pin connector assembly extends through the pressure bulkhead and “relay[s] an electrical signal from the first end of the pressure bulkhead to the second end of the pressure bulkhead.” *Id.* at 11:33–38.

The precise claim language is important in multiple respects. First, there is a clear distinction between the ends of the pressure bulkhead and the outer surface of the pressure bulkhead. The outer surface must be sealingly received within the tandem seal adapter; the ends need not be. And, as the Federal Circuit has repeatedly explained, “[d]ifferent claim terms are presumed to have different meanings.” *Bd. of Regents of the Univ. of Texas Sys. v. BENQ Am. Corp.*, 533 F.3d 1362, 1371 (Fed. Cir. 2008). Second, the claim language makes clear that the electrical signal has to run all the way from one end to the other of the pressure bulkhead; it is not sufficient for the electrical signal to move only from one half or one side to the other, as it would render the claimed invention inoperable. *See* Ex. A (Fayard Decl.) ¶ 18.

Other intrinsic evidence supports GR Energy’s position that an “end” is a clearly defined point or edge of a component and not a vague reference to one “side” or “half” of the component. For instance, in describing certain pins found in figure 5, the specification states that “the pins each include a first end and a second end opposite the first end,” and that the “second end is wider than the first end.” ’697 patent at 8:59–62. Furthermore, figure 5 points directly to the outermost edges of the pin as the ends, and, critically, the only “wider” portion of the pin is the furthest edge of the pin.

2. Extrinsic Evidence

The extrinsic evidence also supports GR Energy’s proposed constructions. Multiple dictionaries provide definitions of “end” that are consistent with how a person of ordinary skill in the art would understand the term in view of the intrinsic evidence. For example, Merriam-Webster defines end alternatively as “a point that marks the extent of something,” and “the extreme or last part lengthwise.”¹ Cambridge offers a similar definition: “a part of a place or thing that is farthest away from the center.”² Other contemporary dictionaries are in accord.³

Furthermore, Mr. Alfredo Fayard, who spent nearly four decades as a perforation engineer at Schlumberger, explains that GR Energy’s construction is consistent with his understanding of the disputed term. Ex. A ¶ 16. Mr. Fayard explains that in order to operate, the claimed invention requires an electrical connection that runs from one end of the pressure bulkhead to the other end, and that necessarily requires the signal running from one outermost edge to the other outermost edge. *Id.* ¶ 18. If the electrical signal did not travel from the first

¹ *Merriam-Webster.com Dictionary*, <https://www.merriam-webster.com/dictionary/end>.

² *Cambridge Dictionary*, <https://dictionary.cambridge.org/us/dictionary/english/end>.

³ *Dictionary.com*, <https://www.dictionary.com/browse/end>; *Lexico*, <https://www.lexico.com/en/definition/end>.

outermost edge of the pressure bulkhead to the second outermost edge, it would necessarily stop somewhere in the middle of the bulkhead, meaning the electrical connection would not be made in the tool string. *Id.*

Based on the intrinsic and extrinsic evidence, GR Energy respectfully requests that the Court construe “first end” / “second end” to mean “first furthest part, point, or edge lengthwise” / “second furthest part, point, or edge lengthwise.”

B. “pin connector”

GR Energy’s Proposed Construction	Dyna’s Proposed Construction
“rigid male electrical contact”	Plain and ordinary meaning

Claim 1 of the ’697 patent requires a pin connector assembly that extends through the pressure bulkhead “from a first pin connector end to a second pin connector end.” Unremarkably, GR Energy’s position is that the claimed *pin* connectors must be *pins*, as opposed to another type of electrical contact. A pin is not a female contact. A pin is not a wire contact. A pin is not a plate contact. A pin is not a crimped and soldered contact. The intrinsic and extrinsic evidence uniformly demonstrate that a pin connector is a particular type of electrical contact: a rigid male electrical contact. Without a construction, Dyna will undoubtedly take license to call any type of electrical connector a pin connector.

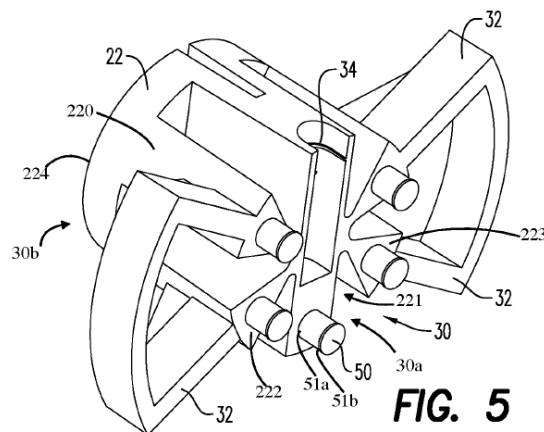
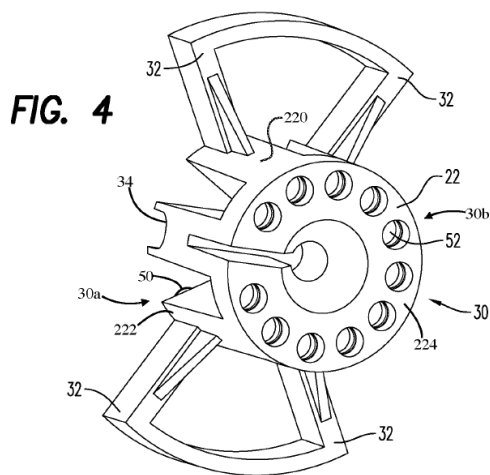
1. The Specification

The specification demonstrates that a pin connector is a rigid male electrical contact and not just any electrical contact. To start, the specification repeatedly distinguishes between electrical connections made through wire contacts and electrical connections made through pin contacts. For instance, in some embodiments a “through wire traverses from the top to the bottom of the perforating gun system making a connection at each charge holder.” ’697 patent at 8:13–15. Figure 29 shows “detonator wires (104)” that run into a “wire connector element (112)”

adjacent to a “ground contact element (114).” Figure 31 discloses a “crimp sleeve (122)” through which the detonator wires run.

The specification also teaches that certain connections can be made without wires. For instance, the specification describes a push-in detonator “that does not use wires to make necessary connections.” *Id.* at 6:12–13. This “push-in” connector “replac[es] any required wires and crimping.” *Id.* at 6:13–15. Another section explains that the term “connector” is distinct from the term “wire,” stating that “in one embodiment, all connections are made by connectors, such as spring-loaded connectors instead of wires.” *Id.* 6:28–31. Thus “pin connector” should not be construed to encompass all types of connectors.

The term “pin” is used consistently throughout the specification to describe a rigid male connector. Figures 4 and 5 provide different views of a “bottom connector” that contains “sockets” and “pins.” As the specification explains, “each socket is spaced apart from an adjacent socket and each pin is spaced apart from an adjacent pin. As shown below, the sockets (52) are hollow cylindrical bores into which something fits, and the pins (50) are rigid cylindrical pieces that project outward.



In describing another aspect of the alleged invention, the patent is clear that “pins outwardly extend from the first base, and the sockets at least partially extend into the second base” *Id.* at 7:30–34. And the assembly is completed by “pushing the assembled components together to engage all pin connections.” *Id.* at 9:67–10:1. The patentee’s repeated pairing of the terms “pin” and “socket” leave no doubt about the physical nature of these components. Pins are rigid male pieces, and sockets are hollow female receptors.

Claim 1 explains that the first and second pin connectors within the pin connector assembly are configured to “relay an electrical signal from the first end of the pressure bulkhead to the second end of the pressure bulkhead.” *Id.* 11:30–37. This is borne out in the specification, which describes a pin connector assembly that includes two “contact pins.” *Id.* at 8:34–36. The pin connectors are configured to connect with and transmit electricity to the detonator assembly, the conductor slug, or an electrical connector. *Id.* at 8:38–40, 9:8–11, Figs. 32, 33. Figure 32 below, shows a pin connector assembly with two pin connectors (yellow). The first pin connector is electrically connected with the bulkhead connector element (red) on one end of the bulkhead. The second pin connector is electrically connected with a conductor slug (green) on the other end of the bulkhead.

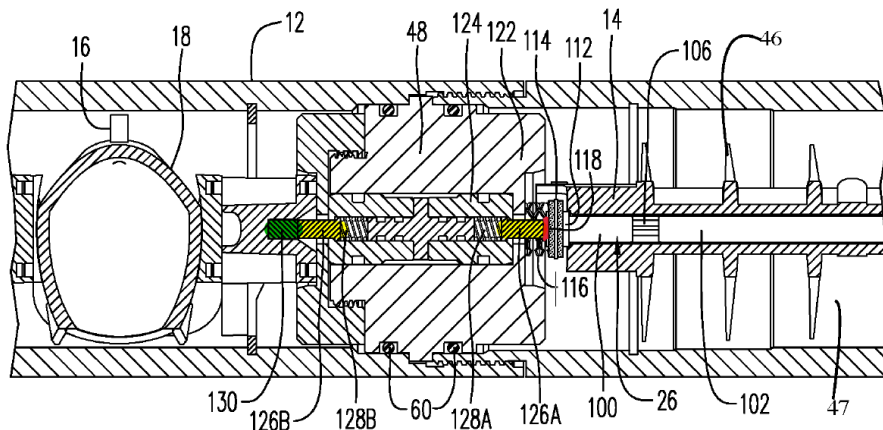


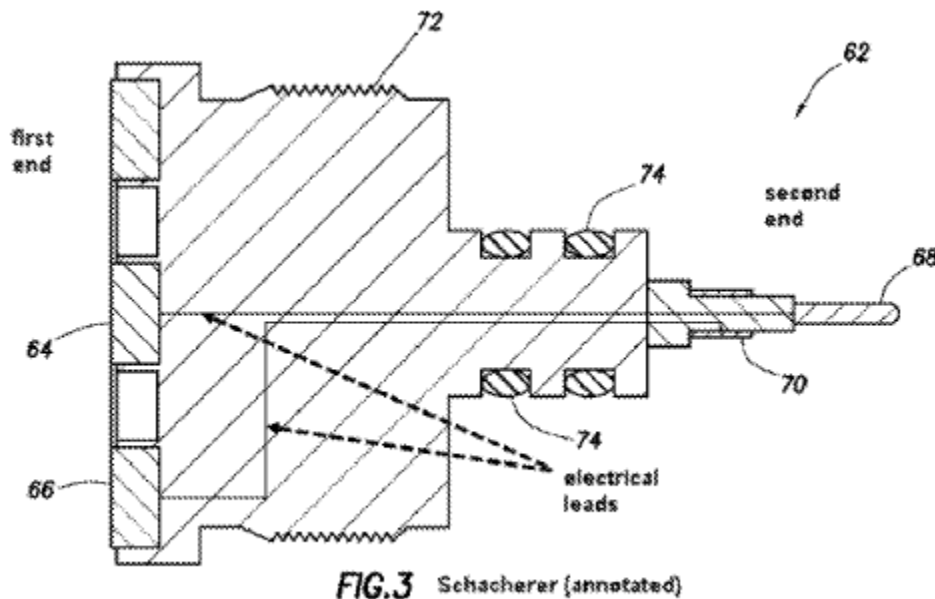
FIG. 32

In view of the claim language, the figures, and the extensive written description, there can be no credible dispute that the claimed “pin connectors” are rigid male electrical contacts.

2. The Prosecution History

The prosecution history of the '697 patent provides further support for GR Energy's proposed construction. The patentee made clear to the examiner that the term pin connector refers to a rigid male electrical contact, and not just any electrical contact. This was the key point of distinction that allowed the patentee to secure the '697 patent in the first place.

As originally filed, claim 1 did not include a “first pin connector end” or a “second pin connector end.” The examiner rejected this broadly worded claim as anticipated by U.S. Patent No. 9,677,363 (“Schacherer”), a prior art patent assigned to Halliburton. The examiner explained that Schacherer disclosed “a pin connector assembly extending through the pressure bulkhead and configured to relay an electrical signal from the first end to the second end.” The examiner went so far as to annotate figures from Schacherer and pointed to a “first end,” which comprises flat electrical contact plates and a “second end” consisting of a single electrical pin connector.



Rather than attempt to correct the examiner, the patentee filed a narrowing amendment to overcome the rejection. The amended language expressly added a first pin connector end and a second pin connector end, to distinguish Schacherer which had only one pin connector end:

a pressure bulkhead having an outer surface, a first end and a second end, the outer surface of the pressure bulkhead is sealingly received in the bore of the tandem seal adapter, the pressure bulkhead also having a pin connector assembly extending through the pressure bulkhead from a first pin connector end to a second pin connector end, and configured to relay an electrical signal from the first end of the pressure bulkhead to the second end of the pressure bulkhead, wherein the first pin connector end extends beyond the first end of the pressure bulkhead and the second pin connector end extends beyond the second end of the pressure bulkhead

The patentee argued to the examiner that Schacherer did not anticipate the amended claim 1 because Schacherer lacked “a first pin connector end” that “extends beyond the first end of the pressure bulkhead.” Ex. B, at p. 3.⁴ In other words, the patentee was arguing that a flat electrical contact is not a pin contact that extends outwards. The examiner allowed the amended claim in express reliance on the patentee’s amendment and corresponding argument about Schacherer not having two pin connector ends. *Id.* at p. 11 (“The examiner is in agreement with Applicant’s remarks filed 12 February 2020 directed to the present claims patentably distinguishing from the art of record.”).

This exchange presents a classic case of amendment-based prosecution history disclaimer. The Supreme Court has recognized that a “patentee’s decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claim and the amended claim.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 740, (2002). The narrowing amendment made in this case was for the purpose of distinguishing the claimed invention over Schacherer. The patentee made it clear that the

⁴ The pin cites in citations to Exhibit B correspond to the page numbers of the exhibit located at the bottom right hand corner and not to the prosecution history page numbers.

difference in its electrical assembly and Schacherer was that its assembly contained both a first and second pin connector end, both of which extend beyond the bulkhead, whereas Schacherer only included one extending pin connector. That distinction is the “territory” that Dyna has disclaimed.

Accordingly, a construction that makes clear that the invention must contain a rigid male electrical contact at both ends of the bulkhead is appropriate. And Dyna should not be permitted to evade either the plain language of its claim or its own disclaimer under the guise of “plain and ordinary meaning.”

3. Extrinsic Evidence

Contemporary dictionaries explain that a pin is considered a solid or rigid connector piece. For example, Merriam-Webster defines pin as “a piece of solid material (such as wood or metal) used especially for fastening things together or as a support by which one thing may be suspended from another.”⁵ Lexico provides a slightly more technical definition in the context of electrical components, stating that pin means “a metal projection from a plug or an integrated circuit which makes an electrical connection with a socket or another part of a circuit.”⁶ This definition underscores the ’697 patent’s repeated pairing of “pin” with “socket” to denote a male-to-female connection.

GR Energy’s proposed construction of pin connector is also consistent with the opinion of Mr. Fayard, who explains that not all electrical contacts are the same or even interchangeable. Ex. A ¶¶ 19–20. Wires, pins, crimped and soldered contacts, and plate contacts are all physically and structurally distinct components. *Id.* ¶¶ 20–21. And perforation engineers would understand

⁵ *Merriam-Webster.com Dictionary*, <https://www.merriam-webster.com/dictionary/pin>.

⁶ *Lexico*, <https://www.lexico.com/en/definition/pin>.

a pin to be a solid or rigid male contact that can be configured to relay an electrical signal. *Id.*

¶ 21. Accordingly, GR Energy respectfully requests that the Court construe “pin connector” as “rigid male electrical contact.”

C. “in electrical communication with”

GR Energy’s Proposed Construction	Dyna’s Proposed Construction
“receiving information by electric signal”	Plain and ordinary meaning

Claim 1 requires that the “first detonator is *in electrical communication with* the pin connector assembly.” The critical dispute here is whether “electrical communication” is synonymous with “electrical connection.” It is not. Electrical communication requires the transmission of information, whereas electrical connection requires only the transmission of electrical current.

1. Intrinsic Evidence

This intrinsic evidence demonstrates a clear distinction between “electrical communication” and “electrical connection.” The ’697 patent uses both terms to mean different things. Claim 1’s preamble recites “an electrical connection assembly for establishing an electrical connection in a tool string.” This electrical connection is established through a pin connector assembly, which is “configured to relay an electrical signal from the first end of the pressure bulkhead to the second end.” But in addition to merely relaying an electrical signal through the bulkhead, the pin connector assembly must also be in electrical communication with the detonator. That is, the detonator must be able to receive information (e.g., a detonation command) from the pin connector assembly.

The Federal Circuit has consistently held that “Different claim terms are presumed to have different meanings.” *Bd. of Regents of the Univ. of Texas Sys. v. BENQ Am. Corp.*, 533 F.3d 1362, 1371 (Fed. Cir. 2008); *CAE Screenplates Inc. v. Heinrich Fiedler GmbH Co.*, 224

F.3d 1308, 1317 (Fed. Cir. 2000) (“In the absence of any evidence to the contrary, we must presume that the use of these different terms in the claims connotes different meanings.”). Here, claim 1’s varied use of “electrical connection” and “electrical communication” compels the presumption that the terms have different meanings.

The term “electrical communication” was not included in the claim by accident. It was added by amendment during prosecution to distinguish a prior art reference. The original claim required only a detonator “configured to receive the electrical signal from the pressure bulkhead,” whereas the amended language requires a detonator “in electrical communication with the pin connector assembly.” For clarity, the claim amendment is shown below:

~~a detonator within the downhole tool, the detonator configured to receive the electrical signal from the pressure bulkhead~~ is in electrical communication with the pin connector assembly, wherein the tandem seal adapter and the pressure bulkhead are configured to provide a seal between the detonator and an environment on the ~~outside~~ second end of the tandem seal adapter.⁷

This amendment was made for a purpose. It was made to distinguish between a detonator that merely received an electrical signal and a detonator that received an electrical communication. As the patentee explained, “claim 1 is further amended to, among other things, recite ‘the detonator is in electrical communication with the pin connector assembly’ in view of the quoted feature(s) in amended claim 1 in view of Schacherer.” Ex. B, at p. 22. This specific amended language was identified as a basis for allowance by the examiner. Ex. B, at p. 11.

2. Extrinsic Evidence

As made clear by the extrinsic evidence, the difference between an electrical connection and electrical communication is the difference between turning on a conventional light bulb by

⁷ A similar amendment was made to claim 10, further evincing the patentee’s intent to draw a distinction.

flipping a switch to deliver electrical current and turning on a smart light bulb by transmitting an electrical communication that contains a command. There is simply no reasonable definition of “electrical communication” that does not contemplate the transmission of information. Technical and contemporary dictionaries are in accord on this point.⁸

Mr. Fayard explains in his declaration that it would make sense to a person of skill in the art for a detonator to receive information through an electrical signal. Ex. A ¶ 25. Modern detonators deployed in perforation guns are operated at the surface by sophisticated firing panels and firing testers. These units run software programs that allow a gun string to be tested, verified, and selectively fired. As Dyna explains in its public statements, “unlike traditional perforating switches and detonators, the integrated switch-detonator requires a series of specific digital codes for initiating so that stray voltage/current, RF signals and other energy sources cannot unintentionally initiate the detonator or igniter.”⁹ Thus a person of ordinary skill in the art would readily understand that the type of detonators contemplated by the ’697 patent are configured to initiate through receiving information by an electrical signal.

D. “connected to”

GR Energy’s Proposed Construction	Dyna’s Proposed Construction
“joined or coupled together”	“joined or coupled in a manner that resists separation and not merely by physical contact”

⁸ *Standard Dictionary of Electrical and Electronics Terms* (4th ed. 1988) (“the transmission of information from one point to another by means of electromagnetic waves”) attached as Ex. C; *Merriam-Webster.com Dictionary*, <https://www.merriam-webster.com/dictionary/communication>; *Lexico*, <https://www.lexico.com/en/definition/communication?locale=en>.

⁹ <https://www.globenewswire.com/en/news-release/2015/05/05/1053833/0/en/DynaEnergetics-Achieves-Selective-Perforating-Safety-Milestone.html>.

Claims 1 and 9 recite that the gun carrier is “connected to” the first/second end of the tandem seal adapter. ’697 patent at 11:28–29 and 12:30–31. For the term “connected to,” both sides agree that it generally means “joined or coupled together,” which comports with the term’s general understanding and its use in the ’697 patent. However, Dyna’s proposed construction goes a step further by specifying the “manner” of that connection: that it “resists separation” and that it is “not merely by physical contact.” Dyna’s proposed language is problematic and only risks jury confusion.

First, Dyna’s proposed construction does not specify what it means to “resist separation” or provide any guidance on how much resistance is adequate. Something may “resist separation” when pulled apart by human hands but easily separate when pulled apart by a machine. Dyna’s construction does not explain what level of force serves as the threshold of when something “resists” separation. Similarly, Dyna’s proposal does not explain what type of force that it must be resistant to. For example, a bolt threaded onto a nut may “resist separation” when pulled in the lateral direction, but conversely, may separate easily when the bolt/nut is rotated (i.e., unscrewed) as they are designed to do. Here, the ’697 patent is totally silent on this issue and never references the concept of “resisting separation.” As a result, by including Dyna’s extra limitation, the jury will have no basis to determine whether something adequately resists separation or not. Such a definition is contrary to the patent regime’s goal to minimize “zones of uncertainty” and provide clear notice of what is claimed. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014).

Equally problematic, Dyna’s added phrase “not merely by physical contact” narrows the claim scope by exclusion without any support in the specification. But neither the claim nor the specification define the term to exclude physical contact, and there was no discussion during

prosecution regarding that concept. As a result, there is no basis to import a negative limitation into the claim.

Additionally, Dyna’s proposed construction does not provide any guidance as to what it means to resist separation “merely by physical contact.” As a result, Dyna’s construction would only add more uncertainty to the scope of the asserted claims. For the above reasons, the Court should reject the extra language proposed by Dyna and adopt GR Energy’s construction.

E. “not possible to interrupt the electrical signal from the first pin connector end to the second pin connector end”

GR Energy’s Proposed Construction	Dyna’s Proposed Construction
indefinite	Plain and ordinary meaning

The dispute about this term is simple. Dyna included a negative limitation of literal impossibility into the claim without providing any disclosure or teaching about what “not possible to interrupt” means or how to measure or achieve it. Claim 2 smacks of indefiniteness. As the old adage goes, “anything is possible.” So how does one of skill in the art know when he has achieved an assembly where it is impossible to interrupt the electrical signal? A person of skill in the art who has reviewed the intrinsic evidence will never know the answer, because the patent does not explain what this impossible limitation even means, much less provide enabling disclosure.

A patent is indefinite unless the “patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). Here, claim 2 does no such thing. Claim 2 takes the electrical connection assembly of claim 1 that is merely “configured to relay an electrical signal” and adds an unverifiable negative limitation to the assembly that “it is not possible to interrupt the electrical signal....” An

electrical signal travels along an electrically conductive pathway that is built of connections from an electrical source to a termination point. Ex. A ¶ 29. Any break along that path creates a possibility for “interrupt[ing] the electrical signal” of the purported invention. *Id.* This is how a light switch works. Lights are turned off by breaking the electrical path from the source to the bulb. In any and all potential practical implementations of the alleged invention, there is going to be some manufacturing process involved that creates the parts that form the electrical pathway. *Id.* ¶ 30. Every solder, contact, or connection in the electrical pathway can fail, and in such a situation it is possible to interrupt the electrical signal claimed in claim 2. *Id.*

In the context of claim 2, no better example can illustrate the problem with this unverifiable limitation at issue than the embodiment described at column 8:31–41 and illustrated in figures 32, 33, and 35B:

In an embodiment as shown in FIGS. 32, 33 and 35B illustrate a connection of the above-described detonator assembly 26 to the tandem seal adapter 48 and a pressure bulkhead 124. The bulkhead 124 includes spring connector end interfaces comprising contact pins 126A, 126B, linked to coil springs 128A, 128B. This dual spring pin connector assembly including the bulkhead 124 and coil springs 128A, 128B is positioned within the tandem seal adapter 48 extending from a conductor slug 130 to the bulkhead connector element. The dual spring pin connector assembly is connected to the through wire 106 of the detonator assembly 26.

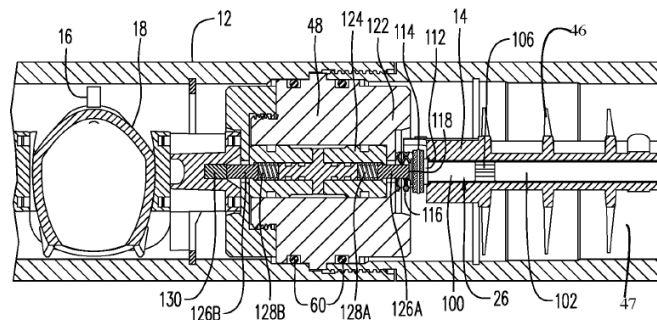


FIG. 32

As the patent describes and can be seen in figure 32, there are at least six connection points from one end of the pin connector assembly to the other (detonator to pin, pin to spring, spring to bulkhead connector element, bulkhead connector element to spring, spring to pin, pin to conductor slug) that make up the electrical pathway. A failure of any of the components or a faulty connection amongst them makes it possible for the signal to be interrupted from the “first pin connector end to the second pin connector end.” By defining the invention with pin connectors, the patentee has created a situation where one of skill in the art will always know it is possible for a failed electrical connection and will never know how to ensure the impossibility of electric signal interruption.

Dyna could conceivably salvage the term if it were able to identify some “narrowing construction” that accords the term definite meaning. *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). Of course, courts “will not narrow a claim term beyond its plain and ordinary meaning unless there is support for the limitations in the words of the claim, the specification, or the prosecution history.” Tellingly, Dyna does not even attempt to proffer a narrowed construction that would save claim 2. Nor could it, given the dearth of intrinsic support for the disputed term. Instead, Dyna once again reverts to plain and ordinary meaning.

Finally, to the extent that the claim is not indefinite, it is not enabled for similar reasons. The ’697 patent says only that the bulkhead is an “assembly” comprised of “multiple small parts,” explains that “contact pins” may be “linked to coil springs,” and then merely provides images of spring and non-spring preferred embodiments. ’697 patent at 8:6, 35–36, Figs. 19 and 32. These figures and corresponding vague text fail to disclose reasonable basic enabling structure to show how one skilled in the art would achieve the novel “uninterruptable”

characteristics. *Auto. Techs. Int'l, Inc. v. BMW of N. Am., Inc.*, 501 F.3d 1274, 1280 (Fed. Cir. 2007).

V. CONCLUSION

For the foregoing reasons, GR Energy respectfully requests that the Court adopt its proposed claim constructions.

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Respectfully submitted,

By: /s/ Aimee P. Fagan

Aimee P. Fagan, Lead Counsel

Texas State Bar No. 24010299

afagan@sidley.com

Phillip M. Aurentz

Texas State Bar No. 24059404

paurentz@sidley.com

Erik B. Fountain

Texas State Bar No. 24097701

efountain@sidley.com

SIDLEY AUSTIN LLP

2021 McKinney Avenue, Suite 2000

Dallas, Texas 75201

Telephone: (214) 981-3300

Facsimile: (214) 981-3400

**ATTORNEYS FOR DEFENDANTS
GR ENERGY SERVICES OPERATING
GP LLC; GR ENERGY SERVICES
MANAGEMENT, LP; and GR ENERGY
SERVICES, LLC**

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the above and foregoing document was filed electronically on October 18, 2021. As such, this document was served on all counsel of record pursuant to the Federal Rules of Civil Procedure.

/s/ Aimee P. Fagan

Aimee P. Fagan